

## REMARKS

Claims 1-66 are pending in the present application and stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,236,847 B1 ("Stikvoort") in view of U.S. Patent No. 6,020,783 ("Coppola"). Applicants respectfully request that the Examiner reconsider the Reply mailed August 24, 2004, the arguments and evidence as set forth below, and provide the following findings of fact so as to clarify any issues that may be ripe for appeal.

The Examiner states that to modify Stikvoort using the teachings of Coppola would be "obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Coppola to the system of Stilvoort [sic] in order to provide a notch frequency filter that operates over a wide frequency range with **optimal performance**" (emphasis added). Office Action Made Final at page 19.

As the Examiner may recall, Stikvoort describes a receiver 2 using two polyphase filters 16, 19 to produce an asymmetric bandpass filter function. The Examiner then proposes an alleged notch filter by inverting the bandpass filter frequency response as allegedly taught by Coppola. As is well known in the art, a bandpass filter will allow through (e.g., pass), for example, a desired frequency or channel while attenuating undesired frequencies or channels outside the desired frequency band. An inverter with a bandpass filter as allegedly taught by Coppola will presumably do just the opposite. In this case, the bandpass filter/inverter arrangement allegedly in Coppola would attenuate the desired frequency or channel while allowing through the undesired frequencies or channels.

*Finding of Fact No. 1 Sought from Examiner.* In view of the discussion above, does not the modification of the receiver 2 of Stikvoort in view of the bandpass filter/inverter arrangement allegedly in Coppola decrease desired signal and increase undesired noise? Does decreasing desired signal and increasing undesired noise constitute **optimal performance** as alleged by the Examiner?

*Finding of Fact No. 2 Sought from Examiner.* Is it the Examiner's allegation that the receiver 2 of Stikvoort will still be able to operate even though, as modified by Coppola, the receiver 2 is now attenuating the desired frequency or channel while allowing the undesired frequencies or channels through?

*Finding of Fact No. 3 Sought from Examiner.* Kindly explain, for the record, how the receiver 2 of Stikvoort will be able to operate after being modified by the teachings of Coppola. In explaining the modified operation/function of the receiver 2 of Stikvoort in view of the teachings of Coppola, the Examiner is reminded that the modification of Stikvoort (1) cannot change the principle of operation of Stikvoort, see, e.g., M.P.E.P. § 2143.01, and (2) cannot render Stikvoort unsatisfactory for its intended purpose, see, e.g., M.P.E.P. § 2143.01.

Applicants respectfully submit, that by modifying the receiver 2 of Stikvoort with the alleged notch filter of Coppola, the receiver 2 of Stikvoort **MUST** have a changed principled of operation (which is prohibited by the M.P.E.P.) since the receiver 2 of Stikvoort, once modified with an inverter/bandpass arrangement as alleged in Coppola, now **REJECTS** the desired frequency or channel and **ALLOWS THROUGH** the undesired frequencies or channels.

Applicants also respectfully submit, that by modifying the receiver 2 of Stikvoort with the alleged notch filter of Coppola, the receiver 2 of Stikvoort has been rendered inoperable for its intended purpose (which is prohibited by the M.P.E.P.) as a receiver since the receiver 2 of Stikvoort, once modified with an inverter/bandpass arrangement as alleged in Coppola, now **REJECTS** the desired frequency or channel and **ALLOWS THROUGH** the undesired frequencies or channels.

*Finding of Fact No. 4 Sought from Examiner.* In view of the Examiner's proposed modification of the receiver 2 of Stikvoort in view of the bandpass filter/inverter arrangement allegedly in Coppola, does the Examiner truly believe that the combination of Stikvoort in view of Coppola is motivated by "a notch frequency filter that operates over a wide frequency range with **optimal performance**" (emphasis added). Office Action Made Final at page 20. In other words, does the Examiner really believe that **optimal performance** is achieved even though modifying the receiver 2 of Stikvoort with the bandpass filter/inverter arrangement allegedly in

Coppola would produce a modified receiver 2 that no longer allows through the desired frequencies and channels, but instead allows through the undesired frequencies and channels? Is **optimal performance** either achieved or obvious in light of a modification to the receiver 2 of Stikvoort which improperly changes the principle of operation of the receiver 2 of Stikvoort? Is **optimal performance** either achieved or obvious in light of a modification to the receiver 2 of Stikvoort which improperly renders the receiver 2 of Stikvoort unsatisfactory for its intended purpose?

*Finding of Fact No. 5 Sought from Examiner.* Does the Examiner not agree that (1) Coppola teaches away from Stikvoort and (2) Stikvoort teaches away from Coppola?

M.P.E.P. § 2145(X)(D)(2) states that “[i]t is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983)”.

Applicants respectfully submit that, since Stikvoort teaches an asymmetric bandpass filter function and Coppola teaches an RF notch filter, Stikvoort and Coppola teach away from their combination. In other words, if Stikvoort teaches a bandpass filter, then Coppola teaches away by teaching a bandstop filter (e.g., a notch filter). Does not the Examiner believe that modifying the bandpass filter of Stikvoort to become a bandstop filter as allegedly in Coppola is materially and significantly teaching away from the bandpass filter of Stikvoort?

Coppola teaches using an RF filter (i.e., an RF notch filter). On the other hand, Stikvoort teaches using polyphase filters. “Polyphase filters can make use of multiple phase shifted input signals (to be provided by the frequency conversion means) to produce asymmetric transfer functions enabling suppression of signals at the image frequency **without requiring an RF filter.**” Col. 1, lines 35-40 of Stikvoort (emphasis added). So according to Stikvoort, polyphase filters are used *instead* of RF filters to produce asymmetric bandpass transfer functions which are more effective at filtering image signals than RF filters. RF filters are further disparaged in the prior art section of Stikvoort as being “quite expensive”. In view of these disadvantages of RF filters as described in Stikvoort, Stikvoort states that “[t]he object of the present invention is to provide a receiver in which beside the image rejection also the adjacent channel selectivity is

realized in a very cost effective way." Thus, the very object of the invention of Stikvoort ~~teaches~~ away from using the RF filters of Coppola.

Coppola teaches away from passing a signal through a series of filters. In disparaging a prior art arrangement, Coppola states that "an incoming spectra passes through each of ~~these~~ notch filters with each notch filter attenuating its corresponding frequency spectrum. However, the desired signals in the spectra also degrade as they pass through the successive notch filters". Col. 1, lines 25-30 of Coppola. Coppola's solution is to place the notch filters in parallel. See, e.g., parallel notch filter paths 14, 20, 24 of FIG. 1 of Coppola. On the other hand, Stikvoort teaches away from Coppola by making the signal pass through a series of polyphase filters 16, 19. According to Coppola, the signal in Stikvoort is degraded as it passes through successive polyphase filters. Thus, Stikvoort teaches away from the very improvement trumpeted by Coppola.

Applicants respectfully submit that, according to M.P.E.P. § 2145(X)(D)(2), the combination of Stikvoort and Coppola is improper since Stikvoort and Coppola teach away from each other.

Applicants respectfully submit that any one of the above-discussed arguments alone rebuts the *prima facie* case of obviousness as set forth in the Office Action Made Final. It is therefore respectfully requested that the obviousness rejection be withdrawn with respect to claims 1-66.

*Finding of Fact No. 6 Sought from Examiner.* Does not the significant evidence and argument provided by Applicants that (1) modifying Stikvoort in view of Coppola changes the principle of operation of Stikvoort which is prohibited by the M.P.E.P.; (2) modifying Stikvoort in view of Coppola renders Stikvoort inoperable for its intended purpose which is prohibited by the M.P.E.P.; (3) since Coppola materially and significantly teaches away from the combination with Stikvoort, the proposed combination is improper according to the M.P.E.P.; and (4) since Stikvoort materially and significantly teaches away from the combination with Coppola, the proposed combination is improper according to the M.P.E.P. -- does not the significant evidence and argument provided herein and in the Reply dated August 24, 2004, which is incorporated

herein by reference in its entirety, rebut any *prima facie* case of obviousness as alleged by the Examiner?

Applicants respectfully draw the attention of the Examiner to M.P.E.P. § 706.07 which states that "[t]he examiner should never lose sight of the fact that in every case the applicant is entitled to a full and fair hearing, and that a clear issue between applicant and examiner should be developed, if possible, before appeal." The above-raised questions deserve a full and fair hearing.

Applicants further respectfully draw the attention of the Examiner to M.P.E.P. § 2144.08 (III) entitled "RECONSIDER ALL EVIDENCE AND CLEARLY COMMUNICATE FINDINGS AND CONCLUSIONS", which states:

A determination under 35 U.S.C. 103 should rest on all the evidence and should not be influenced by any earlier conclusion. See, e.g., *Piasecki*, 745 F.2d at 1472-73, 223 USPQ at 788; *In re Eli Lilly & Co.*, 902 F.2d 943, 945, 14 USPQ2d 1741, 1743 (Fed. Cir. 1990). Thus, once the applicant has presented rebuttal evidence, Office personnel should reconsider any initial obviousness determination in view of the entire record. See, e.g., *Piasecki*, 745 F.2d at 1472, 233 USPQ at 788; *Eli Lilly*, 902 F.2d at 945, 14 USPQ2d at 1743. All the proposed rejections and their bases should be reviewed to confirm their correctness. Only then should any rejection be imposed in an Office action. The Office action should clearly communicate the Office's findings and conclusions, articulating how the conclusions are supported by the findings.

Where applicable, the findings should clearly articulate which portions of the reference support any rejection. Explicit findings on motivation or suggestion to select the claimed invention should also be articulated in order to support a 35 U.S.C. 103 ground of rejection. *Dillon*, 919 F.2d at 693, 16 USPQ2d at 1901; *In re Mills*, 916 F.2d 680, 683, 16 USPQ2d 1430, 1433 (Fed. Cir. 1990). Conclusory statements of similarity or motivation, without any articulated rationale or evidentiary support, do not constitute sufficient factual findings.

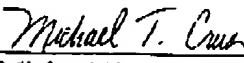
Since the obviousness conclusion, reached by the Examiner, is believed to be incorrect and was the reason for making the previous office action final, Applicants respectfully request that a subsequent office action be issued which is non-final.

In view of at least the foregoing, it is respectfully submitted that the pending claims 1-66 are in condition for allowance. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the below-listed telephone number.

Please charge any required fees not paid herewith or credit any overpayment to the Deposit Account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

Dated: February 28, 2005

Respectfully submitted,

  
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